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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/593,308	09/18/2006	Yvonne Heischkel	295788US0PCT	7530

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OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P.
1940 DUKE STREET
ALEXANDRIA, VA 22314

EXAMINER

BALASUBRAMANIAN, VENKATARAMAN

ART UNIT	PAPER NUMBER
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1624

NOTIFICATION DATE	DELIVERY MODE
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11/16/2009

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

patentdocket@oblon.com
oblonpat@oblon.com
jgardner@oblon.com

Office Action Summary	Application No. 10/593,308	Applicant(s) HEISCHKEL ET AL.	
	Examiner /Venkataraman Balasubramanian/	Art Unit 1624	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 June 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 21-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 21-35 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Applicants' response, which included cancellation of claims 11-20 and addition of new claims 21-35, filed on 06/23/2009, is made of record. Claims 21-35 are now pending. In view of cancellation of claims 1-20, all rejections made in the previous office action are rendered moot.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 21-35 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

1. Claim 21 and its dependent claims 22-35 are indefinite as it is not clear what process is embraced in claim 21 and how the product of formula I is made by the process embraced therein. The process claim appears to perform a transesterification or amidation process wherein R⁶-O of the reactant of formula II is replaced with R³-X¹. But, the process "reacting 1,3,5-triazine carbamate of formula II with an alcohol of the formula R¹-OH, an amine of the formula R¹-NH₂, an alcohol of the formula R²-OH, an amine of the formula R²-NH₂" besides reacting the said carbamate with an alcohol of the formula R³-OH, an amine of the formula R³-NH₂. It is not clear how one would be able to arrive at product of formula I by performing said reaction with an alcohol of R¹-OH, an amine of the formula R¹-NH₂, an alcohol of the formula R²-OH, an amine of the formula R²-NH₂, all which would not give triazine carbamate of formula I with desired

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R^3 -X group. More specifically, in such cases the reaction would lead to replacement of R^6 -O in the reactant of formula II with R^1 -O, R^1 -NH, R^2 O, or R^2 NH not R^3 -X. As it recited, the process is vague and unclear as to how the transesterification or amidation would occur to give triazine carbamate of formula I.

Furthermore, when Y^1 is $CO-OR^4$, if the reaction with an alcohol of the formula R^2 -OH, an amine of the formula R^2 -NH₂, an alcohol of the formula R^3 -OH, an amine of the formula R^3 -NH₂ were performed it will not lead to formula I with $Z^1 = -(CO)X^1-R^1$. Similarly, when Y^2 is $CO-OR^5$, if the reaction with an alcohol of the formula R^1 -OH, an amine of the formula R^1 -NH₂, an alcohol of the formula R^3 -OH, an amine of the formula R^3 -NH₂ were performed it will not lead to formula I with $Z^1 = -(CO)X^2-R^2$. Also the transesterification with triazine carbamate of formula II wherein Y^1 is $CO-OR^4$ and Y^2 is $CO-OR^5$ with alcohols as recited would lead to mixture of products. Hence, it is not clear how one would be able to arrive at triazine carbamate of formula I.

2. Recitation of "the 1,3,5-triazine carbamates of formula" in claims 30-35 renders these claims indefinite as it is not clear what formula is intended and what its structural make-up is.

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 21-35 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for process for making triazine carbamate of formula I wherein Z^1 and Z^2 are hydrogen by reacting triazine carbamate of formula II, wherein

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Y^1 and Y^2 are hydrogen or Y^1 and Y^2 are CO-O-R^4 and CO-O-R^5 with an alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$, $\text{R}^3\text{-OH}$, or an amine, $\text{R}^1\text{-NH}_2$, $\text{R}^2\text{-NH}_2$, $\text{R}^3\text{-NH}_2$, wherein $\text{R}^1=\text{R}^2=\text{R}^3$, does not reasonably provide enablement for process for making triazine carbamate of formula I wherein Z^1 and Z^2 are $\text{CO-X}^1\text{-R}^1$ and $\text{CO-X}^2\text{-R}^2$ respectively by reacting triazine carbamate of formula II, wherein Y^1 and Y^2 are hydrogen with an alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$, or wherein Y^1 and Y^2 are CO-O-R^4 and CO-O-R^5 with wherein Y^1 and Y^2 are hydrogen with an alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$ as embraced in claim language. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

In evaluating the enablement question, following factors are considered. Note In re Wands, 8 USPQ2d 1400 and Ex parte Forman, 230 USPQ 546. The factors include: 1) The nature of the invention, 2) the state of the prior art, 3) the predictability or lack thereof in the art, 4) the amount of direction or guidance present, 5) the presence or absence of working examples, 6) the breadth of the claims, and 7) the quantity of experimentation needed.

1. The nature of the invention and the state of the prior art:

The instant claim 21 is drawn to a process of making compound of formula I by reacting of formula 2 with an alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$, $\text{R}^3\text{-OH}$, or an amine, $\text{R}^1\text{-NH}_2$, $\text{R}^2\text{-NH}_2$, $\text{R}^3\text{-NH}_2$. Specification while enabled for making compound of formula I by reacting compound of formula 2 with wherein Y^1 and Y^2 are hydrogen or Y^1 and Y^2 are CO-O-R^4 and CO-O-R^5 with an alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$, $\text{R}^3\text{-OH}$, or an amine, $\text{R}^1\text{-NH}_2$, $\text{R}^2\text{-NH}_2$, $\text{R}^3\text{-}$

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NH_2 , wherein $\text{R}^1=\text{R}^2=\text{R}^3$, is not enabled for process for making triazine carbamate of formula I wherein Z^1 and Z^2 are $\text{CO-X}^1\text{-R}^1$ and $\text{CO-X}^2\text{-R}^2$ respectively by reacting triazine carbamate of formula II, wherein Y^1 and Y^2 are hydrogen with an alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$, or wherein Y^1 and Y^2 are CO-O-R^4 and CO-O-R^5 with wherein Y^1 and Y^2 are hydrogen with an alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$.

As recited, the process implies that the reaction would occur leading to triazine carbamate of formula I with carbamate groups bearing only $\text{R}^3\text{-X}^3$, $\text{R}^1\text{-X-R}^2\text{-X}^2$ groups by reacting with an alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$, $\text{R}^3\text{-OH}$, or an amine, $\text{R}^1\text{-NH}_2$, $\text{R}^2\text{-NH}_2$, $\text{R}^3\text{-NH}_2$, for which there is no enabling disclosure. Although it would be true when $\text{R}^1=\text{R}^2=\text{R}^3$ groups are same, when they are different, the triazine of formula II which has one or three different carbamate groups can react with either any one of the alcohol, $\text{R}^1\text{-OH}$, $\text{R}^2\text{-OH}$, $\text{R}^3\text{-OH}$, or any one of amine $\text{R}^1\text{-NH}_2$, $\text{R}^2\text{-NH}_2$, $\text{R}^3\text{-NH}_2$ groups to give undesired products. It is not clear how one would be able to arrive at product of formula I by performing said reaction with an alcohol of $\text{R}^1\text{-OH}$, an amine of the formula $\text{R}^1\text{-NH}_2$, an alcohol of the formula $\text{R}^2\text{-OH}$, an amine of the formula $\text{R}^2\text{-NH}_2$, all which would not give triazine carbamate of formula I with desired $\text{R}^3\text{-X}$ group. More specifically, in such cases the reaction would lead to replacement of $\text{R}^6\text{-O}$ in the reactant of formula II with $\text{R}^1\text{-O}$, $\text{R}^1\text{-NH}$, R^2O , or R^2NH not $\text{R}^3\text{-X}$. As it recited, the process is vague and unclear as to how the transesterification or amidation would occur to give triazine carbamate of formula I. Furthermore, when Y^1 is CO-OR^4 , if the reaction with an alcohol of the formula $\text{R}^2\text{-OH}$, an amine of the formula $\text{R}^2\text{-NH}_2$, an alcohol of the formula $\text{R}^3\text{-OH}$, an amine of the formula $\text{R}^3\text{-NH}_2$ were performed it will not lead to

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formula I with $Z^1 = -(\text{CO})X^1-R^1$. Similarly, when Y^2 is CO-OR^5 , if the reaction with an alcohol of the formula $R^1\text{-OH}$, an amine of the formula $R^1\text{-NH}_2$, an alcohol of the formula $R^3\text{-OH}$, an amine of the formula $R^3\text{-NH}_2$ were performed it will not lead to formula I with $Z^1 = -(\text{CO})X^2-R^2$. Also the transesterification with triazine carbamate of formula II wherein Y^1 is CO-OR^4 and Y^2 is CO-OR^5 with alcohols as recited would lead to mixture of products. Specification has no teaching or suggestion as to how to perform said process as embraced in the instant claims to arrive at compound of formula I.

2. The predictability or lack thereof in the art:

Hence the process as applied to the above-mentioned compounds claimed by the applicant is not an art-recognized process and hence there should be adequate enabling disclosure in the specification with working example(s).

3. The amount of direction or guidance present:

Examples illustrated in the experimental section or written description offer no guidance or teachings as to how perform the process of making triazine of formula I with the given choices of variable groups and given choices of alcohols and amines as embraced in claim 21.

4. The presence or absence of working examples:

Although examples 1-10 show the process for making triazine carbamate of formula I, it is limited to the process wherein R^1 , R^2 and R^3 are same and do not include variable choices for these alcohols or amines in starting material and final produce

5. The breadth of the claims:

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Specification has no support, as noted above, for making compound of formula I reacting compound of formula II with various alcohols and amines. There is no support the process generically embraced in the process of the claim would lead to desired compound of formula I.

6. The quantity of experimentation needed:

The quantity of experimentation needed would be an undue burden on skilled art in the chemical art since there is inadequate guidance given to the skilled artisan for the many reasons stated above. Even with the undue burden of experimentation, there is no guarantee that one would get the product of desired structure, namely compound of formula II embraced in the instant claim 21.

Also, note MPEP 2164.08(b) which states that claims that read on "... significant numbers of inoperative embodiments would render claims nonenabled when the specification does not clearly identify the operative embodiments and undue experimentation is involved in determining those that are operative.". Clearly that is the case here.

Thus, factors such as "sufficient working examples", the "level of skill in the art and predictability, etc. have been demonstrated to be sufficiently lacking in the case for the instant claims.

MPEP 2164.01(a) states, "A conclusion of lack of enablement means that, based on the evidence regarding each of the above factors, the specification, at the time the application was filed, would not have taught one skilled in the art how to make and/or

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use the full scope of the claimed invention without undue experimentation. In re Wright, 999 F.2d 1557,1562, 27 USPQ2d 1510, 1513 (Fed. Cir. 1993).”

That conclusion is clearly justified here. Thus, undue experimentation will be required to make Applicants' invention.

Conclusion

Any inquiry concerning this communication from the examiner should be addressed to Venkataraman Balasubramanian (Bala) whose telephone number is (571) 272-0662. The examiner can normally be reached on Monday through Thursday from 8.00 AM to 6.00 PM. The Supervisory Patent Examiner (SPE) of the art unit 1624 is James O. Wilson, whose telephone number is 571-272-0661. The fax phone number for the organization where this application or proceeding is assigned (571) 273-8300. Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (571) 272-1600.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAG. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-2 17-9197 (toll-free).

/Venkataraman Balasubramanian/

Primary Examiner, Art Unit 1624

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